

4-BAND STEREO RADIO CASSETTE RECORDER

MODEL NO. **TPR-905E,K**

AIWA® [SERVICE MANUAL]



Set using ISO screws



Shown above is TPR-905E

DATE OF ISSUE 8/1978

SPECIFICATIONS

GENERAL

Semiconductors:	4 ICs, 27 transistors, 15 diodes, 1 LED, 1 FET
Power source:	Batteries, DC 7.5V (UM-1 x 5) AC 110~120V/220~240V (E model) AC 120 V/240 V (K model) (switchable) 50/60 Hz
Power consumption:	16W (E model) 15W (K model)
Speakers:	100 mm ϕ x 2
Dimension:	415(W) x 268(H) x 108(D) mm
Weight:	4.3 kg (w/batteries)
Supplied accessories:	AC power cord x 1 Cassette tape x 1 Batteries (UM-1) x 5 Head cleaning stick x 1 Erase plug x 2

RADIO SECTION

Circuit:	Superheterodyne
Frequency range:	FM 87.5~108 MHz SW 5.7~19 MHz MW 515~1650 kHz LW 145 ~ 320 kHz
Intermediate frequency:	FM 10.7 MHz SW,MW,LW 468 kHz FM 4 \pm 3 dB (at 88 MHz) 3 \pm 3 dB (at 98, 108 MHz)
Sensitivity: (at S/N 6 dB)	SW 28 \pm 5 dB (at 5.9 MHz) 20 \pm 5 dB (at 12, 18 MHz) MW 43 \pm 4 dB (at 600 kHz) 42 \pm 4 dB (at 1000, 1400 kHz) LW 53 \pm 5 dB (at 150 kHz) 50 \pm 5 dB (at 220, 300 kHz)
FM stereo separation:	32 \pm 5 dB (at 1 kHz)
Antennas:	Built-in whip antenna for FM, SW Built-in ferrite bar antenna for MW, LW

TAPE RECORDER SECTION

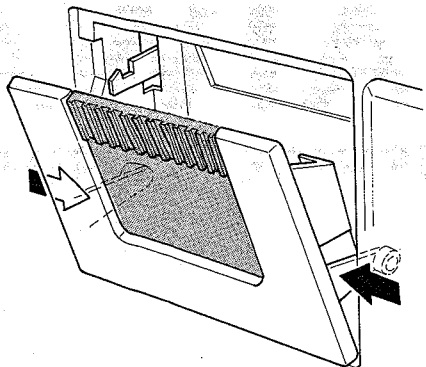
Tape speed:	4.75 cm/sec. \pm 2.5%
Recording system:	AC bias
Erasing system:	AC erase
Record bias frequency:	50 \pm 1 kHz
Distortion:	1.3 \pm 1.0% (PB) 1.7 \pm 1.0% (REC/PB)
Frequency response:	80~10 kHz
Signal to noise ratio: (Un-Weighted)	56/50 \pm 4 dB [DC/AC] (PB) 50/47 \pm 4 dB [DC/AC] (REC/PB)
Erasing ratio:	63 \pm 5 dB
Separation:	40 \pm 5 dB (REC/PB)
Maximum output power:	5.4W (2.7W + 2.7W)
Head:	Super permalloy head
FF & rewind time:	80 \pm 5 sec. (w/C-60 cassette)
Automatic stop system:	Mechanical full auto-stop
Automatic shut-off action time:	Less than 10 sec.
Pinch roller pressure:	300 $\begin{smallmatrix} +50 \\ -0 \end{smallmatrix}$ g
Wow & Flutter:	Less than 0.17% (WRMS)
Take-up torque:	50 \pm 10 g-cm
FF & rewind torque:	100 $\begin{smallmatrix} +20 \\ -10 \end{smallmatrix}$ g-cm

- The specifications and external appearance of this set are subject to change without prior notice.

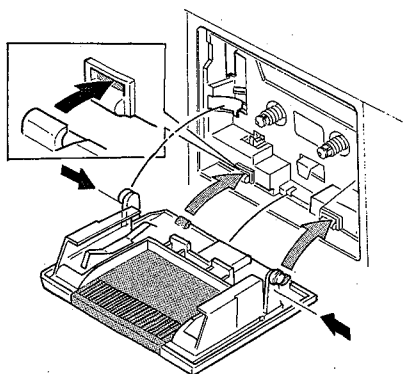
DISASSEMBLY INSTRUCTIONS

To Remove Cassette Lid

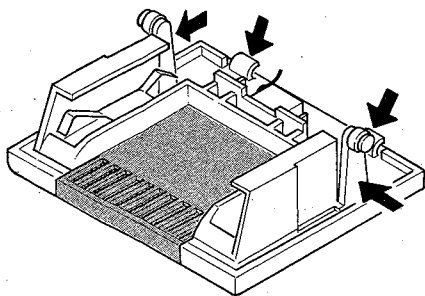
Pull toward you while pushing the part marked with the arrow.

**To Install Cassette Lid**

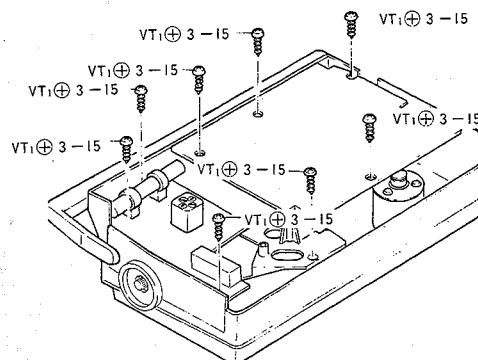
Attach the cassette lid while pushing the part marked with the arrow.



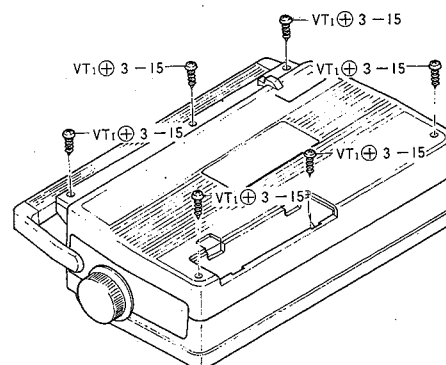
Note: Do not remove or assemble the cassette lid by force as the parts of the cassette lid indicated by arrows might be broken.

**To Remove Chassis**

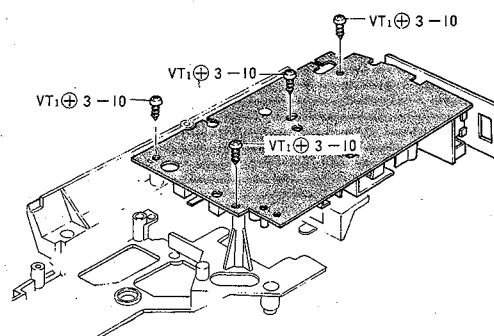
- 1) Remove the control knobs.
- 2) Remove 8 screws.

**To Remove Back Cover**

Remove 6 screws.

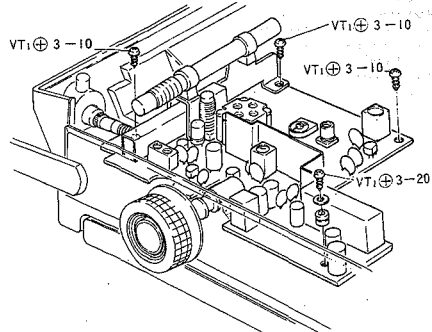
**To Remove Audio Circuit Board**

Remove 4 screws.



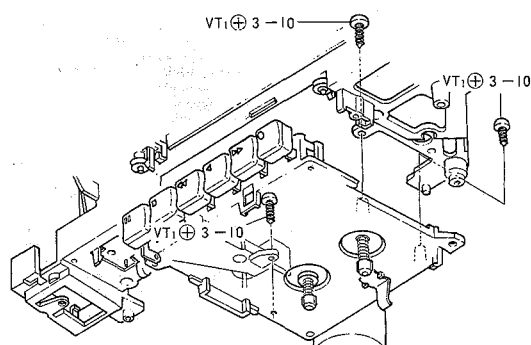
To Remove Tuner Circuit Board

Remove 4 screws.

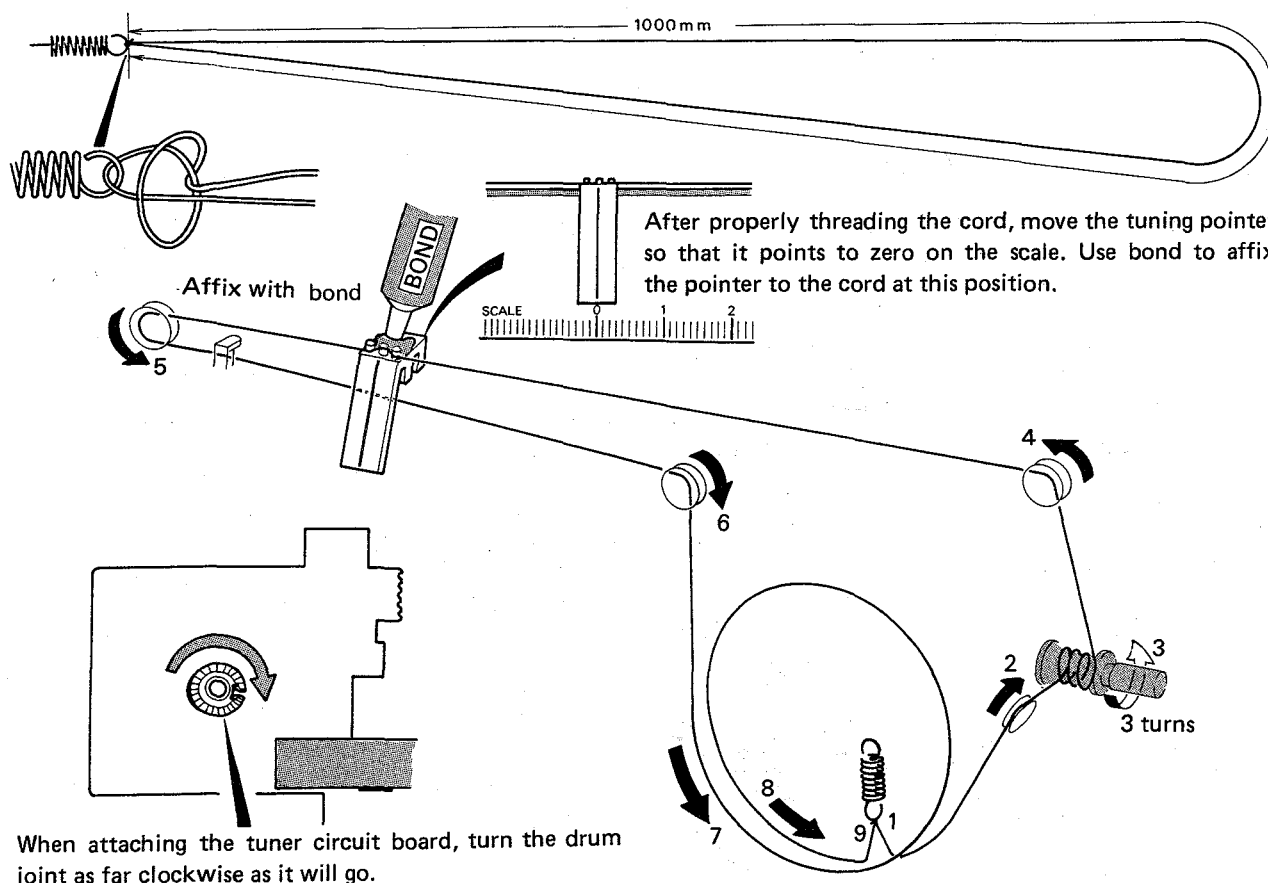


To Remove Mechanism

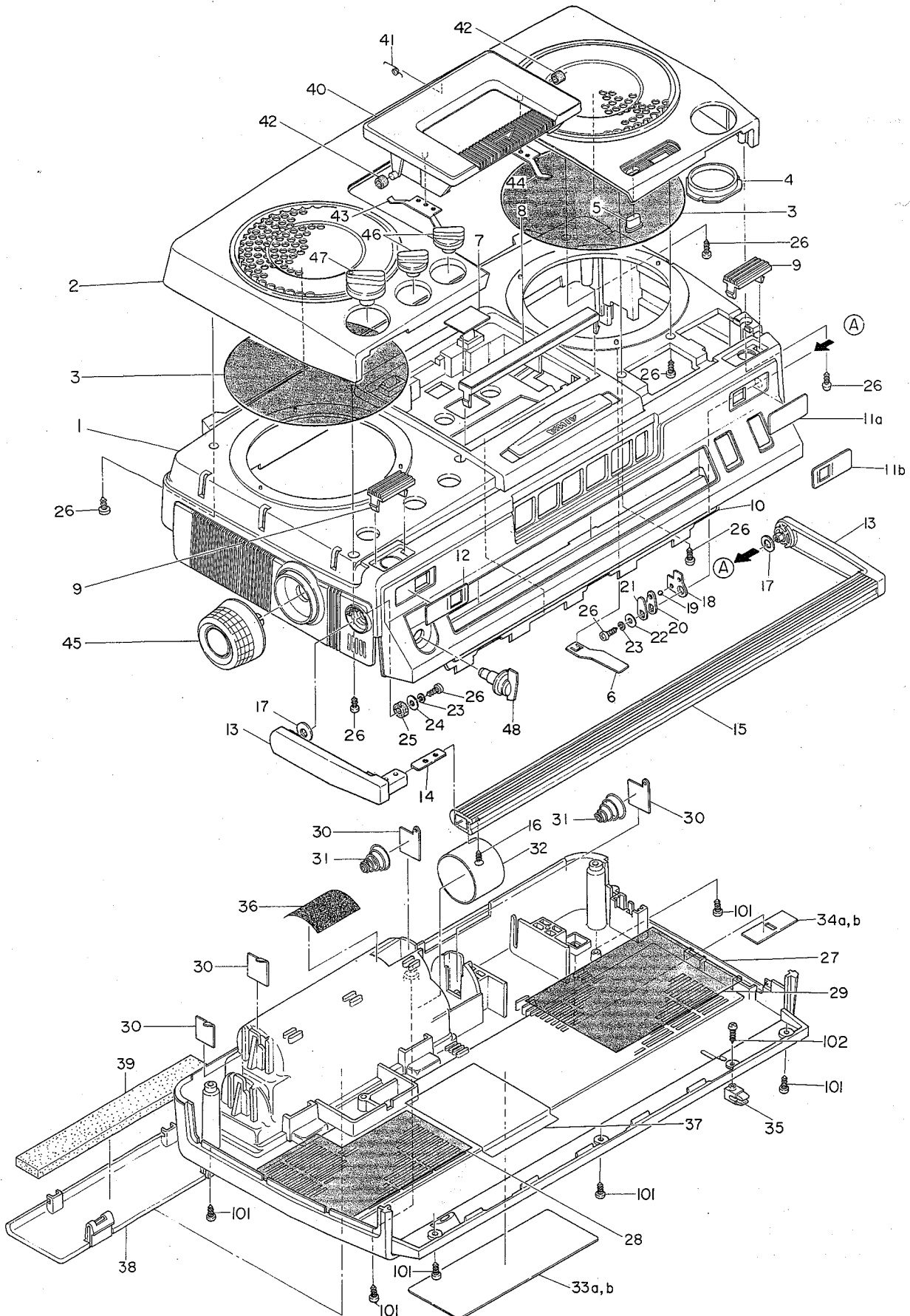
Remove the counter belt and 3 screws.



DIAL CORD STRINGING



EXPLODED VIEW-1



PARTS LIST

MECHANICAL PARTS

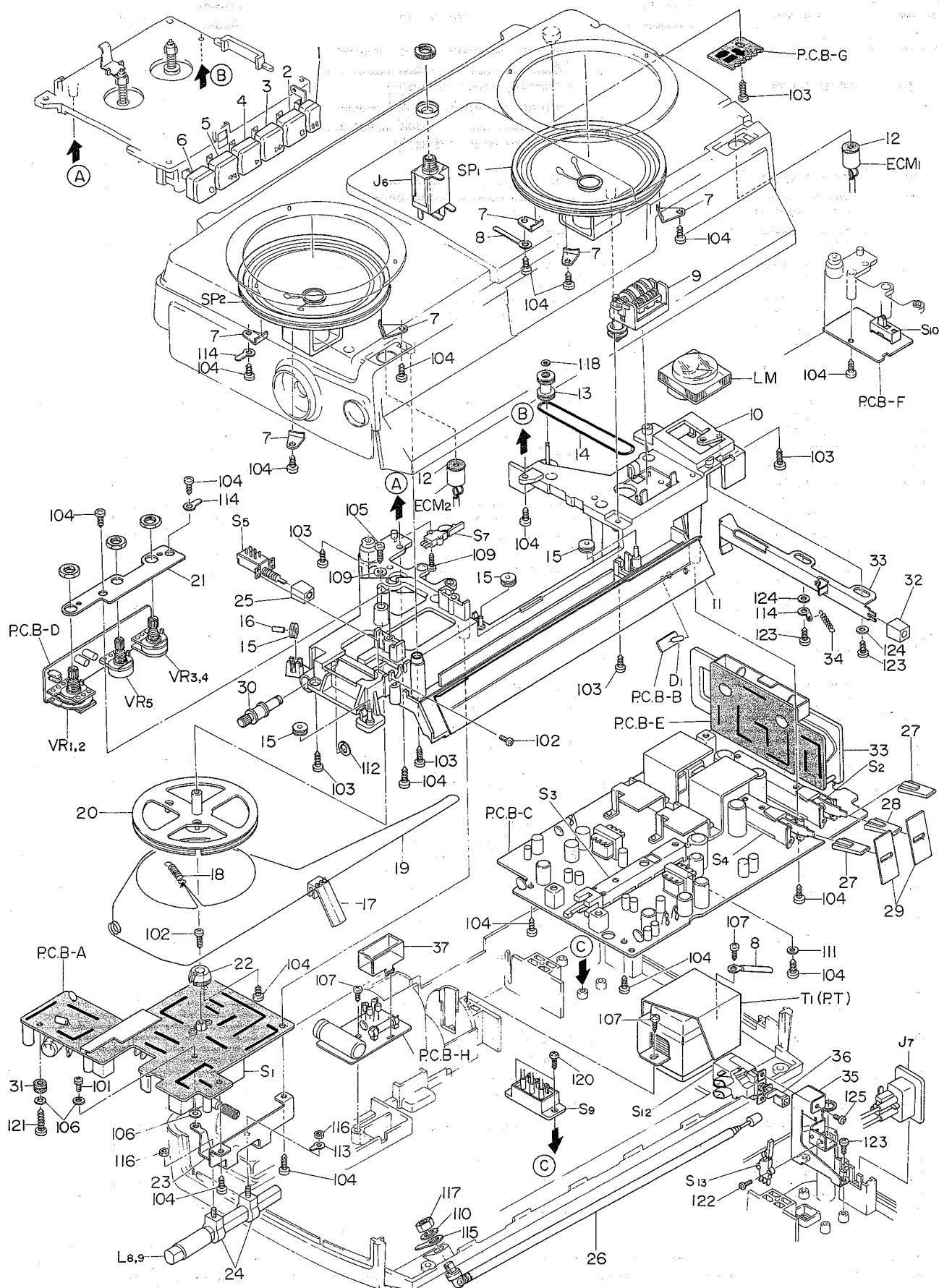
■ * mark in this part list shows exclusive part
(which is used) for only Model TPR-905.

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1~39	09-017-475-01		Cabinet assembly — "E" model (Main case ass'y + Back cover ass'y + Battery room lid ass'y)		
1~39	09-017-478-01		Cabinet assembly — "K" model (Main case ass'y + Back cover ass'y + Battery room lid ass'y)		
1~26	09-017-476-01		Main case ass'y (E model only)		
1~26	09-017-479-01		Main case ass'y (K model only)		
1-1	82-539-060-01		Main case	*	1
1-2	82-539-040-01		Panel, Front	*	1
1-3	82-539-043-01		Dust screen cloth ϕ 114	*	2
1-4	82-539-036-01		Ring	*	1
1-5	82-539-014-01		Push button (RESET)	*	1
1-6	82-533-214-01		Plate spring, Reset	TPR-920	1
1-7	82-386-033-01		Label, Tape indication	AD-1250	1
1-8	82-538-009-01		Head lid		1
1-9	82-539-010-01		Grille, ECM	*	2
1-10	82-539-003-01		Window, Tuning dial	*	1
1-11a	82-539-062-01		Name plate (E model only)	*	1
1-11b	82-539-063-01		Name plate, Power (K model only)	*	1
1-12	82-539-028-01		Name plate, LOUDNESS	*	1
1-13	82-535-024-01		Handle arm	TPR-915	2
1-14	82-535-208-01		Nut, Handle grip	TPR-915	2
1-15	82-535-025-01		Handle grip	TPR-915	1
1-16	82-237-075-01		Q + 2.6-10		4
1-17	82-422-251-01		Poly-slider washer		2
1-18	82-461-353-01		Actuating plate, Carrying handle	TPR-930	1
1-19	87-073-006-01		Steel ball 3ϕ		1
1-20	82-461-303-01		Pressure plate, Carrying handle	TPR-930	1
1-21	82-461-324-01		Pressure plate spring, Carrying handle	TPR-930	1
1-22	87-410-315-01		W3-8-0.5		1
1-23	87-421-306-01		SW-3		2
1-24	87-081-841-01		W3-10-0.5		1
1-25	82-461-366-01		Felt, Carrying handle	TPR-930	1
1-26	87-351-098-01		VT ₁ + 3-14		9
27~37	09-017-477-01		Back cover ass'y (E model only)		
27~37	09-017-480-01		Back cover ass'y (K model only)		
1-27	82-539-005-01		Back cover	*	1
1-28	82-539-032-01		Dust screen cloth	*	1
1-29	82-533-048-01		Dust screen cloth, Back cover	TPR-920	1
1-30	87-038-032-01		Terminal plate, Battery		4
1-31	82-222-036-01		Spring, Battery		2
1-32	82-535-207-01		Pipe, Battery	TPR-915	1
1-33a	82-539-051-01		Name plate, Spec. (E model only)	*	1
1-33b	82-539-050-01		Name plate, Spec. (K model only)	*	1
1-34a	82-539-033-01		Name plate, Voltage selector (E model only)	*	1
1-34b	82-539-057-01		Name plate, Voltage selector (K model only)	*	1
1-35	82-440-038-01		Holder, Antenna		1
1-36	82-533-227-01		Himeron cloth	TPR-920	1
1-37	82-238-609-01		Shield paper		1
1-38	82-538-029-01		Battery room lid		1
1-39	82-533-223-01		Cushion, Battery room lid	TPR-920	1
40~44	09-017-443-01		Cassette lid ass'y		
1-40	82-539-006-01		Cassette lid ass'y	*	1
1-41	82-294-216-01		Spring, Cassette lid	TP-762	1
1-42	82-461-319-01		Cushion, Cassette lid	TPR-930	2
1-43	82-432-239-01		Pressure plate spring R, Cassette lid	TPR-212	1
1-44	82-432-238-01		Pressure plate spring L, Cassette lid	TPR-212	1
1-45	82-535-044-01		Tuning knob ass'y	TPR-915	1
1-46	82-539-020-01		Knob, TONE-BALANCE	*	2
1-47	82-539-017-01		Knob, VOLUME	*	1
1-48	82-539-045-01		Selector knob	*	1

Ref. No.	Part No.	Description	Q'ty
1-101	87-351-099-01	VT ₁ + 3-15	6

Ref. No.	Part No.	Description	Q'ty
1-102	87-341-074-01	UT ₁ + 2.6-8	1

EXPLODED VIEW-2



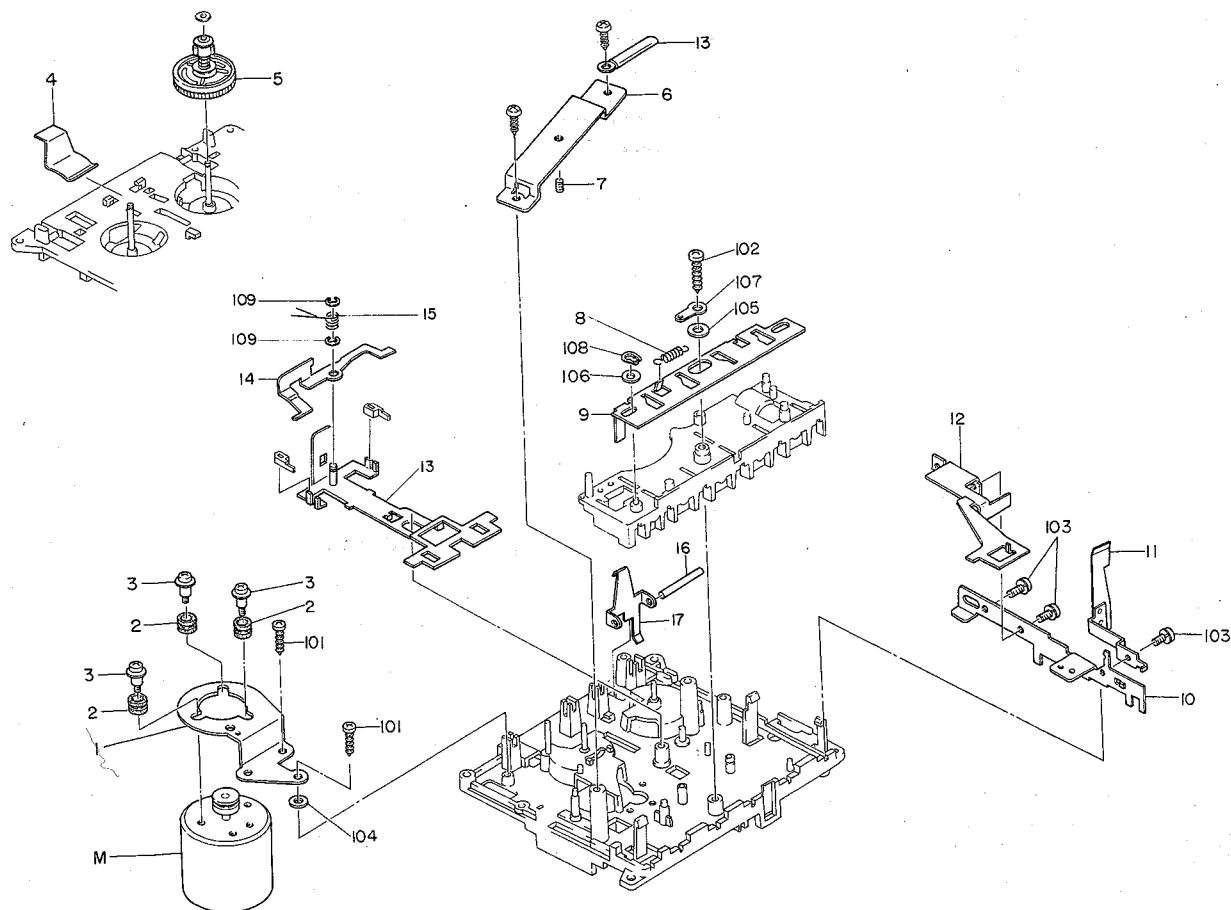
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-531-023-01		Button, PAUSE		1
2-2	82-531-022-01		Button, STOP		1
2-3	82-531-019-01		Button, FF		1
2-4	82-531-018-01		Button, PLAY		1
2-5	82-531-020-01		Button, REW		1
2-6	82-531-021-01		Button, REC		1
2-7	82-274-222-01		Metal fitting, Speaker		6
2-8	87-038-039-01		Wire, Binder		2
2-9	87-040-107-01		Counter		1
2-10	09-017-402-01		Main chassis ass'y		1
2-11	82-539-056-01		Dial plate	*	1
2-12	81-064-059-01		Holder, ECM		2
2-13	82-422-230-01		Relay pulley		1
2-14	82-533-219-01		Belt, Counter		1
2-15	81-302-107-01		Roller		4
2-16	82-422-753-01		Shaft		1
2-17	82-539-011-01		Dial pointer	*	1
2-18	82-439-359-01		Drum spring	TPR-300	1
2-19	87-096-045-01		Dial string		1.1m
2-20	82-439-310-01		Drum, Tuning dial	TPR-300	1
2-21	82-539-202-01		Holder, Volume	*	1
2-22	82-439-311-01		Drum joint	TPR-300	1
2-23	82-535-229-01		Holder, Bar antenna	TPR-915	1
2-24	81-384-209-01		Holder A, Antenna		1
2-25	82-539-039-01		Push button	*	1
2-26	87-043-040-01		Whip antenna		1
2-27	82-539-016-01		Lever switch (GRY)	*	E: 1/K: 2
2-28	82-599-015-01		Lever switch (RED) (E model only)		1
2-29	82-599-030-01		Blind plate		2
2-30	82-533-206-01		Shaft, Tuning dial	TPR-920	1
2-31	87-087-029-01		Rubber cushion		1
2-32	82-539-023-01		Push button (RED) (K model only)	*	1
2-33	82-539-210-01		Lever, Power switch (K model only)	*	1
2-34	82-283-289-01		Spring, Play idler lever (K model only)		1
2-35	82-539-211-01		Holder, Power switch (K model only)	*	1
2-36	82-539-213-01		Sub lever, Power switch (K model only)	*	1
2-37	82-435-212-01		Cover, Fuse		1

Ref. No.	Part No.	Description	Q'ty
2-101	87-263-094-01	V + 3-6	1
2-102	87-263-033-01	V + 2-4	2
2-103	87-351-099-01	VT ₁ + 3-15	8
2-104	87-351-096-01	VT ₁ + 3-10	20
2-105	87-351-098-01	VT ₁ + 3-14	1
2-106	87-081-015-01	FW3-8-0.5	2
2-107	87-341-096-01	UT ₁ + 3-10	3
2-108	87-080-074-01	VS + 2.6-8	1
2-109	87-481-165-01	W3-10-0.5	1
2-110	87-421-309-01	SW-5	1
2-111	87-081-015-01	FW3-8-0.5	1
2-112	87-081-570-01	PW5-10-0.6	1
2-113	87-450-411-01	LB-1	1

Ref. No.	Part No.	Description	Q'ty
2-114	87-450-414-01	LB-4	3
2-115	87-450-418-01	LB-8	1
2-116	87-391-005-01	N-2	2
2-117	87-391-028-11	N-5	1
2-118	87-081-464-01	PW1.8-5-0.5	1
2-119	87-341-037-01	UT ₁ + 2-10	1
2-120	87-341-074-01	UT ₁ + 2.6-8	2
2-121	87-351-102-11	VT ₁ + 3-20	1
2-122	87-051-036-01	U + 2-8	1
2-123	87-341-093-01	UT ₁ + 3-14	2
2-124	87-410-314-01	W3-8-0.3	2
2-125	87-251-094-21	U + 3-6	2

EXPLODED VIEW-3

As this is a PM-1 mechanism, the exploded view is omitted (see the supplement PM-1 mechanism adjustment manual). The exploded view below shows the additional mechanism of the PM-1. Also shown are the attachments of the motor and a list of such.



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
3-1	82-446-203-01		Holder, Motor	TPR-605	1
3-2	87-087-029-01		Rubber cushion		3
3-3	87-081-483-01		Motor screw, M2.6		3
3-4	82-294-213-01		Pressure plate spring, Cassette	TP-762	1
3-5	82-439-460-01		Take-up reel platform ass'y	TPR-300	1
3-6	82-474-219-01		Holder F		1
3-7	82-385-311-01		Thrust screw	AD-6300	1
3-8	82-283-289-01		Spring, Play idler lever		1
3-9	82-294-215-01		Plate, One-finger recording	TP-762	1
3-10	82-294-217-01		Lever, REC	TP-762	1
3-11	82-539-203-01		Plate spring ass'y, REC	*	1
3-12	82-294-214-01		Lever, One-finger recording	TP-762	1
3-13	82-439-270-01		Brake plate ass'y	TPR-300	1
3-14	82-439-271-01		Lever, CrO ₂ selector	TPR-300	1
3-15	82-439-274-01		Spring, CrO ₂ selector lever	TPR-300	1
3-16	82-439-398-01		Shaft, CrO ₂ selector plate spring	TPR-300	1
3-17	82-533-212-01		Plate spring, CrO ₂ selector	TPR-920	1

Ref. No.	Part No.	Description	Q'ty
3-101	87-351-095-01	VT ₁ + 3-8	2
3-102	87-081-556-01	VT ₁ + 3-21	1
3-103	87-480-071-01	VS + 2.6-4	3
3-104	87-410-315-01	W3-8-0.5	1
3-105	87-081-165-01	W3-10-05	1

Ref. No.	Part No.	Description	Q'ty
3-106	87-410-314-01	W3-8-0.3	1
3-107	87-450-414-01	LB-4	1
3-108	87-442-003-01	STP-3	1
3-109	87-441-006-01	STE-2.3	2

The following is the part number list of the  marked parts of the PM-1 mechanism.

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
1-13	82-385-332-01	Spring B; Head adjusting	1	2-33	82-294-217-01	REC lever ass'y	1
1-14	87-046-126-01	Rec. /Pb head	1	2-49	82-442-237-11	Main belt	1
1-25	82-439-237-01	Cassette lock lever	1	2-50	82-385-307-01	Flywheel ass'y	1
1-31	87-046-127-01	Erase head	1	2-51	82-385-314-21	Rubber belt	1
2-31	87-480-071-01	Mounting screw, REC plate spring	1	2-52	82-385-311-01	Screw for thrust bearing plate	1
2-32	82-533-216-01	Plate spring, REC	1	2-53	82-474-219-01	Lower shaft	1
				2-60	82-385-309-11	Worm gear B ass'y	1

HARDWARE NOMENCLATURE

V: Pan head screw



U: Binding head screw



Q: Flat countersunk head screw



VT1: Pan head tapping screw



UT1: Binding head tapping screw



VS: Pan head screw with spring washer



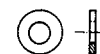
STP: Powerful stop ring



STE: E ring



W: Washer



FW: Fiber washer

PW: Poly-slider washer

SW: Spring washer



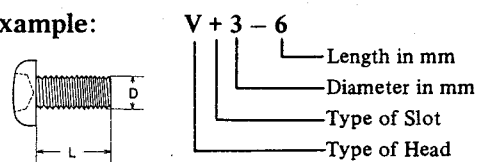
N: Nut



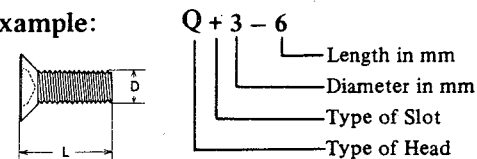
LB: Lug terminal plate



Example:



Example:



ACCESSORIES/PACKAGE

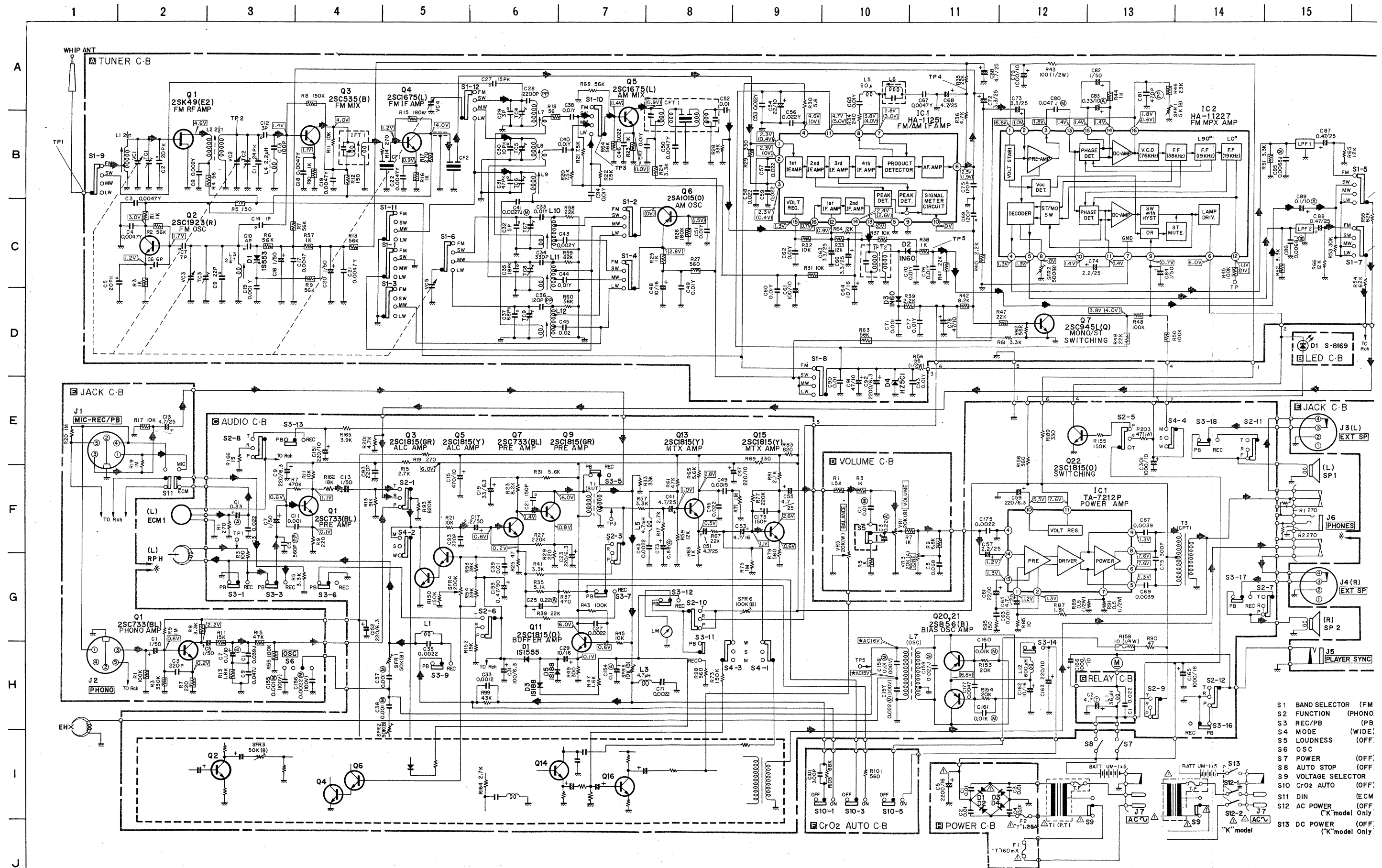
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1	82-539-855-01		Printed indiv., Packing	*	1
2	82-539-852-01		Cushion L, Printed indiv.	*	1
3	82-539-853-01		Cushion R, Printed indiv.	*	1
4	87-051-137-01		Poly-vinyl sack (for AC cord)		1
5	87-056-606-01		Poly-vinyl sack (for case)		1
6	82-539-907-01		Label, POP	*	1
7a	82-539-911-01		Instructions booklet (E model only)	*	1
7b	82-539-913-01		Instructions booklet (K model only)	*	1
8	87-051-171-01		Poly-vinyl sack (for instruction)		1
9	87-056-009-01		Distributors list		1
10	80-291-658-01		Tape cassette DMC-147		1
11	87-032-478-01		DIN erase plug		1
12	87-034-883-01		AC power cord (E model only)		1
13	87-034-871-01		AC power cord (K model only)		1
14	87-047-061-01		Battery, SUM-1AE		5
15	87-056-008-01		Label, AC power cord (K model only)		1
16	87-056-016-01		Tag, Voltage selector (K model only)		1
17	87-058-024-01		Head cleaning pole ass'y		1

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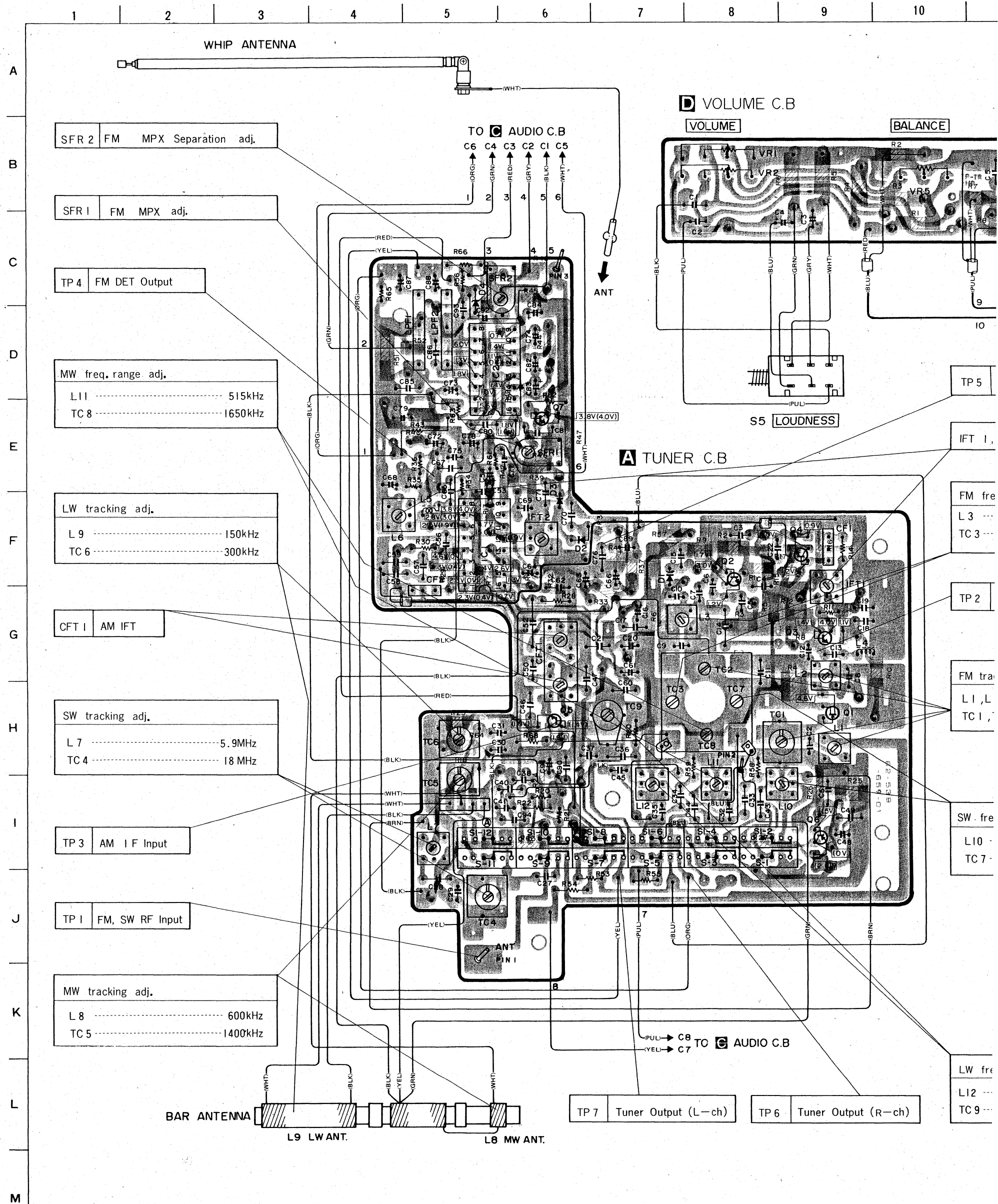
Lined area for writing the memo.

780825(1)-Z

AIWACO.,LTD.



WIRING-1



NOTES (1) B (+) Pattern Compoint side pattern Others pattern (2) The voltage is the reference value m

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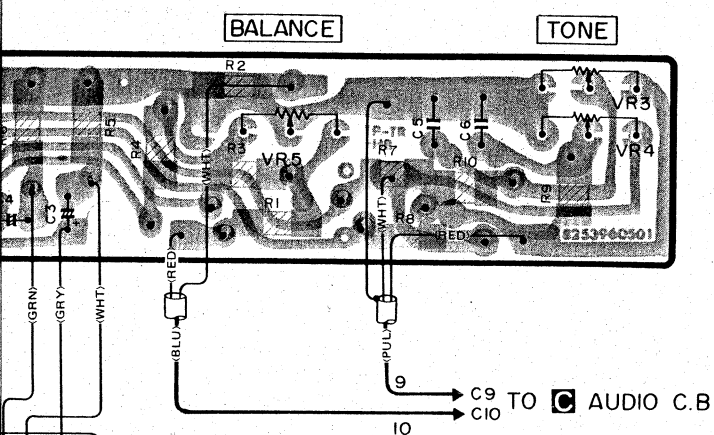
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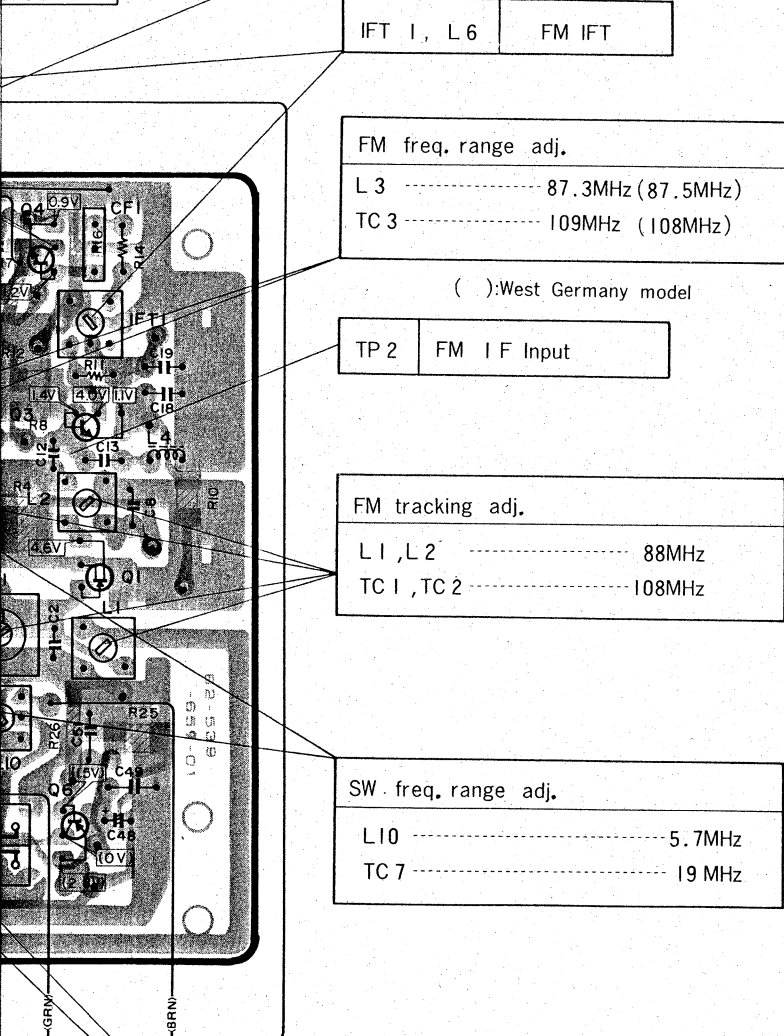
18

19

C.B



LOUDNESS



TP 5 AM DET Output

IFT 1, L 6 FM IFT

FM freq. range adj.
 L 3 87.3MHz (87.5MHz)
 TC 3 109MHz (108MHz)

(): West Germany model

TP 2 FM I F Input

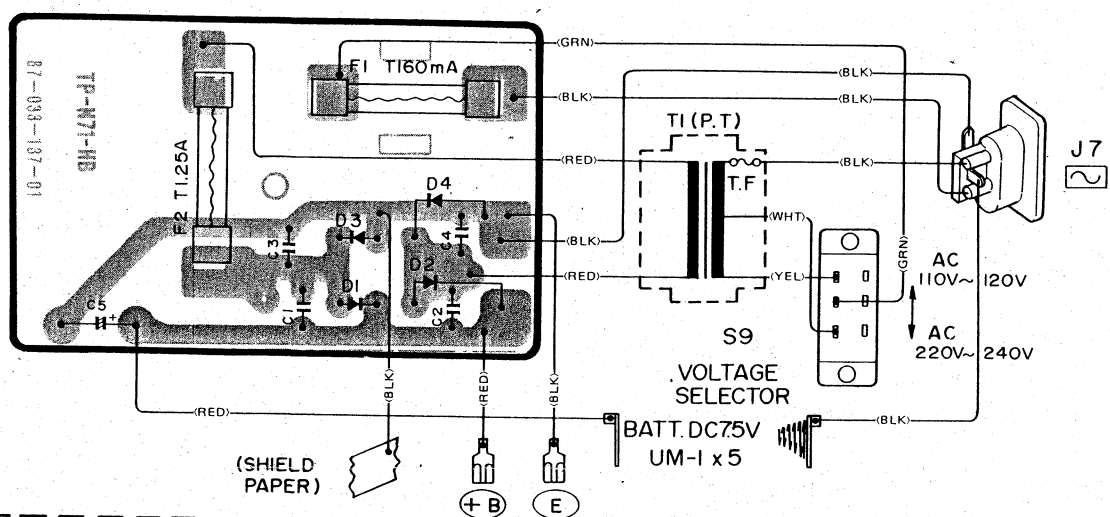
FM tracking adj.
 L 1, L 2 88MHz
 TC 1, TC 2 108MHz

SW. freq. range adj.
 L 10 5.7MHz
 TC 7 19 MHz

LW freq. range adj.
 L 12 145kHz
 TC 9 320kHz

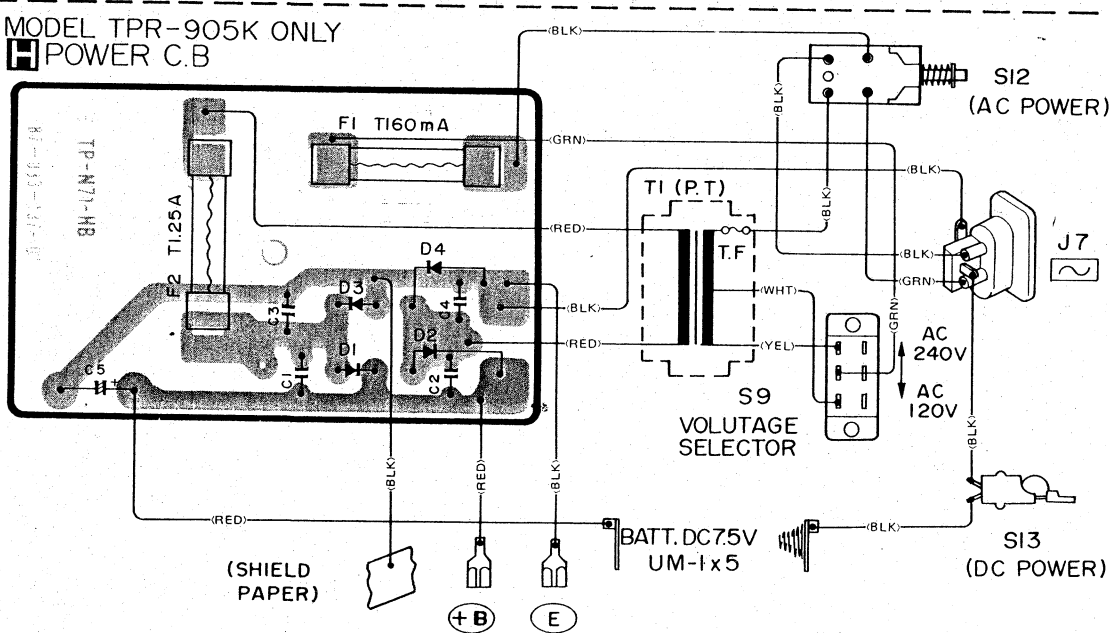
MODEL TPR-905E ONLY

POWER C.B



MODEL TPR-905K ONLY

POWER C.B

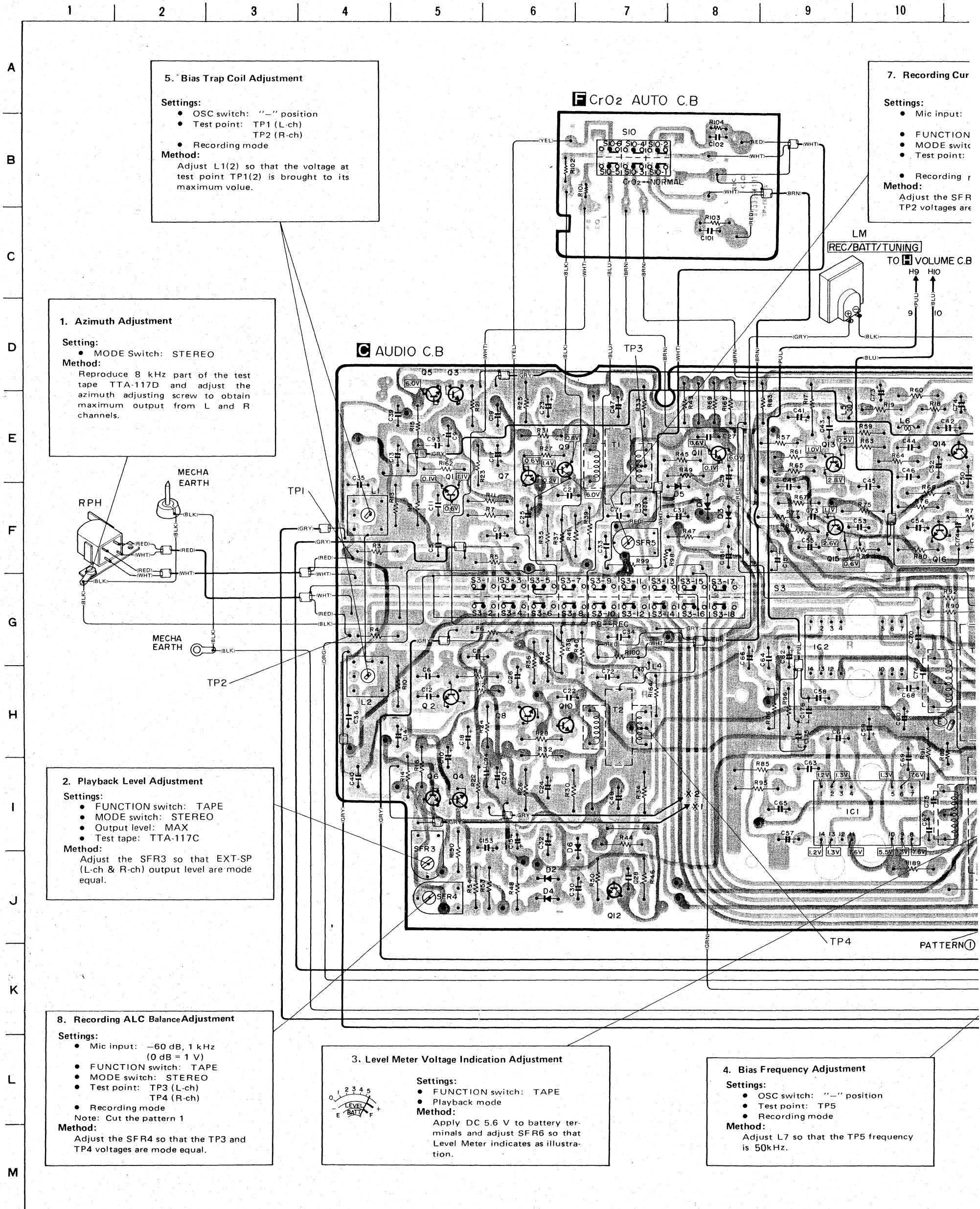


How to change to upper limit of FM frequency range from 108 MHz to 104 MHz.

Symbol No.	Description	108 MHz		104 MHz	
C2	Ceramic Capacitor	20PF	88-212-200-01	33PF	88-212-250-01
C9	Ceramic Capacitor	22PF	88-212-210-01	33PF	88-212-250-01
C11	Ceramic Capacitor	24PF	88-212-220-01	27PF	88-212-230-01
L2	FM RF Coil	2-1/2t	82-546-601-01	Separate Coil from Bobin 1/4t.	

The voltage is the reference value measured with a tester (50K ohms/V DC) when there are no signals.

WIRING-2



NOTES (1) B (+) Pattern Component side pattern Others pattern

(2) The voltage is the reference value me

An asterisk (*) indicates that the value w

Adjust the SFR5 so that the TP1 and TP2 voltages are made equal.

PHONO
FM STEREO

M

E JACK C.B

S7
(POWER)

S8
(AUTO STOP)

Bias Current Adjustment

Settings:

- OSC switch: "—" position
- Test point: TP1 (L-ch)
TP2 (R-ch)
- Recording mode

Method:

Adjust SFR1(2) so that the voltage at test point TP1(2) is 32 mV (320 μ A).

Bias Frequency Adjustment

- OSC switch: “—” position
- Test point: TP5
- Recording mode:

thod:
Adjust L7 so that the TP5 frequency is 50kHz.

The voltage is the reference value measured with a tester (50K ohms/V DC) when there are no signals.

An asterisk (*) indicates that the value was measured with a vacuum-tube voltmeter during recording.

ELECTRICAL MIAN PARTS LIST

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
« TUNER CIRCUIT BOARD SECTION »					
PCB-A	82-539-659-01	Tuner circuit board	Q5,6,13,14, 15,16	89-318-154-01	Transistor, 2SC1815 (Y)
IC1	87-027-285-01	IC, HA-11251	Q11,12,22	89-318-153-01	Transistor, 2SC1815 (O)
IC2	87-027-296-01	IC, HA-11227	Q20,21	89-200-562-01	Transistor, 2SB56 (B)
Q1	87-026-109-01	Transistor, 2SK49E (2)	D1,2	87-027-097-01	Diode, 1S1555
Q2	89-319-232-01	Transistor, 2SC1923 (R)	D3,4,5,6	88-052-188-11	Diode, 1S188 (FM)
Q3	89-305-352-01	Transistor, 2SC535 (B)	L1,2	87-003-034-01	Trap coil
Q4,5	89-316-752-01	Transistor, 2SC1675 (L)	L3,4,5,6	87-005-093-01	Coil, 4.7mH
Q6	89-110-153-01	Transistor, 2SA1015 (O)	L7	82-418-612-01	Bias OSC coil
Q7	89-309-455-01	Transistor, 2SC945L (Q)	L12	82-401-661-01	Choke coil, 600μH
D1	88-052-553-01	Diode, 1S553	T1,2	87-002-103-01	Step-up transformer
D2,3	88-051-060-01	Diode, 1N60	T3,4	87-002-102-01	Output transformer
D4	87-027-286-01	Zener diode, HZ5C1	S2	82-539-615-01	Lever slide switch (FUNCTION)
L1	82-539-657-01	FM antenna coil	S3	82-533-608-01	Slide switch (REC/PB)
L2	82-546-601-01	FM RF coil	S4	82-539-616-01	Lever slide switch (MODE)
L3	87-007-088-01	FM OSC coil, 2½t	SFR1,2,3	87-021-469-01	Semi-fixed resistor, 50kΩ-B
L4	87-005-101-01	FM choke coil, 2.2μH	SFR4	87-021-454-01	Semi-fixed resistor, 200kΩ-B
L5	87-005-104-01	Coil, 20μH	SFR5	87-021-467-01	Semi-fixed resistor, 10kΩ-B
L6	87-008-182-01	FM detect coil	SFR6	87-021-470-01	Semi-fixed resistor, 100kΩ-B
L7	82-539-651-01	SW antenna coil			< Resistor >
L8,9	82-539-650-01	LW, MW bar antenna coil	R158	87-029-017-01	10Ω 1/4W Fuse resistor
L10	87-007-092-01	SW OSC coil			< Capacitors >
L11	87-007-057-01	MW OSC coil	C5,6	87-014-051-01	560pF PP
L12	82-479-664-11	LW OSC coil	C154	87-015-318-01	0.1μF 10V Aluminum solid
VC1~4	87-011-105-01	PVC	C25,26	87-015-319-01	0.22μF 10V Aluminum solid
TC2,3,7,8	87-011-099-01	Trimmer	C1,2	87-015-313-01	0.33μF 10V Aluminum solid
TC1,4,5,6	85-708-604-21	Trimmer	C73,74	87-015-322-01	0.68μF 10V Aluminum solid
TC9	87-008-174-01	FM IFT			« VOLUME CIRCUIT BOARD SECTION »
IFT1	87-008-164-01	AM IFT	PCB-D	82-539-605-01	Volume circuit board
IFT2	87-008-169-01	FM ceramic filter	VR1,2	82-539-621-01	Volume, 20kΩ-B (VOLUME)
CF1,2	87-008-162-01	AM ceramic filter	VR3,4	82-539-603-01	Volume, 20kΩ-A (TONE)
CFT1	87-008-162-01	transformer (E model only)	VR5	82-539-622-01	Volume, 20kΩ-W (BALANCE)
	87-008-150-01	AM ceramic filter			< Capacitor >
		transformer (K model only)	C3,4	87-015-319-01	0.22μF 10V Aluminum solid
CFT1	87-028-038-01	Low-pass filter			« JACK CIRCUIT BOARD SECTION »
LPF1,2	87-021-466-01	Semi-fixed resistor, 5kΩ-B	PCB-E	82-539-642-01	Jack circuit board
SFR1	87-021-527-01	Semi-fixed resistor, 500Ω-B	Q1,2	89-307-336-01	Transistor, 2SC733 (BL)
SFR2	87-031-441-01	Rotary switch (BAND SELECTOR)	S6	82-409-630-01	Slide switch (OSC)
S1	87-033-144-01	Pin			< Capacitor >
PIN-1,2,3	87-032-534-01	Pin, 4P	C7,8	87-015-318-01	0.1μF 10V Aluminum solid
PIN-A					« CrO₂ AUTO CIRCUIT BOARD SECTION »
		< Capacitors >	PCB-F	82-539-641-01	CrO ₂ auto circuit board
C9	88-251-210-01	22pF Ceramic	S10	87-031-404-01	Slide switch (CrO ₂ AUTO)
C36	87-014-035-01	120pF PP			< Capacitor >
C34	87-014-045-01	330pF PP	C101,102	87-014-044-01	300pF PP
C81	87-014-049-01	470pF PP			« RELAY CIRCUIT BOARD SECTION »
C28	87-014-065-01	2200pF PP	PCB-G	82-539-626-01	Relay circuit board
C45,46,53, 56,57,58, 59	87-017-003-01	0.022μF Semiconductor	L1	87-003-039-01	Choke coil, 36μH
C89	87-015-311-01	0.1μF 10V Aluminum solid			< Capacitor >
C83	87-015-320-01	0.33μF 10V Aluminum solid	C2	87-015-306-01	4.7μF 10V Tantalum
					« POWER CIRCUIT BOARD SECTION »
« LED CIRCUIT BOARD SECTION »			PCB-H	87-033-137-01	Power circuit board
PCB-B	82-539-608-01	LED circuit board	D1,2,3,4	87-027-083-01	Diode, 1S1885
D1	87-026-082-01	Light emitting diode, S8169	F1	87-035-080-01	Fuse, "T" 160mA(E model only)
« AUDIO CIRCUIT BOARD SECTION »					
PCB-C	82-539-655-01	Audio circuit board			
IC1,2	87-027-243-01	IC, TA-7212P			
Q1,2,7,8	89-307-336-01	Transistor, 2SC733 (BL)			
Q3,4,9,10	89-318-155-01	Transistor, 2SC1815 (GR)			

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
F1	87-035-132-01	Fuse, "T" 160mA (K model only)	M	87-045-110-01	Motor
F2	87-098-008-01	Fuse label, "T" 160mA	J1,2,3,4	82-539-640-11	Jack plate ass'y (MIC-REC/PB, PHONO, EXT SP)
F2	87-035-117-01	Fuse, "T" 1.25A (E model only)	J6	87-032-881-01	Jack, 6.3 ϕ (HEADPHONE)
F2	87-035-223-01	Fuse, "T" 1.25A (K model only)	J7	87-032-434-01	AC jack
	87-098-017-01	Fuse label, "T" 1.25A	S5	87-031-330-01	Push switch (LOUDNESS)
	87-032-323-01	Fuse clamp	S7	87-031-418-01	Micro switch (POWER)
« MISCELLANEOUS »			S13	87-031-418-01	Micro switch (DC POWER) (K model only)
T1	82-539-648-01	Power transformer (E model only)	S8	87-031-393-01	Leaf switch (AUTO STOP)
T1	82-539-649-01	Power transformer (K model only)	S9	87-031-364-01	Slide switch (VOLTAGE SELECTOR)
RPH	87-046-152-01	REC/PB head	S12	87-031-408-01	Push switch (AC POWER) (K model only)
EH	87-046-127-01	Erase head		87-043-040-01	Whip antenna
ECM1,2	85-868-018-01	ECM, CMU-9			
LM	82-539-611-11	Level meter			
SP1,2	82-431-627-01	Speaker			

LEVEL DIAGRAM

